

2.3 Alternatives Considered but Eliminated from Further Study

Alternative Project Areas: Less desirable abandoned oxbows exist on Santo Domingo Tribal Lands; however, greater volumes of sediment would need to be removed to create the habitat conditions of the Proposed Action and therefore the study of these abandoned oxbows was not advanced.

Other sites were considered for restoration but were eliminated from further consideration for a number of reasons, including cost, accessibility and rank in priority. Dense stands of exotic vegetation and several rows of jetty-jacks surround several potential project sites, which would increase costs and time to complete a project.

Chapter 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

This section describes the environmental consequences of various resources, including geology and soils, hydrology, water resources and water balance, noxious weeds, threatened and endangered species and special status species, cultural resources, Indian Trust Assets, socioeconomic considerations, land use, and environmental justice. The description of the affected environment for these resources can be found in the document, Santo Domingo Tribe–Endangered Species Habitat Improvement Project- Phase II-Environmental Assessment April 2007, and is incorporated by reference in this document.

The affected environment is within the Cochiti Reach of the Middle Rio Grande. The Cochiti Reach extends from Cochiti Dam downstream to the Angostura Dam. This reach has been identified by Reclamation and the USFWS, as well as the Collaborative Program, as an area where habitat/ecosystem restoration projects would be highly beneficial to all life stages of the silvery minnow.

3.2 Description of Relevant Affected Resources

3.2.1 Geology and soils

During construction of the backwater and side channels, care will be taken to minimize sediment erosion. Excavated material will be stockpiled at pre-designated locations or transported to a community borrow pit, and silt fencing will be installed when working near the bank of the river. With these mitigating measures, no impacts are anticipated due to the Proposed Action.

Under the No Action Alternative, incision of the river bed has stabilized. in the Cochiti Reach, whereas the erosion of the river banks has been increasing in the Cochiti Reach. of the Middle Rio Grande. Sediment deposition will be minimal; water will run cold. Under the No Action Alternative, geomorphic conditions will continue to be unfavorable for silvery minnow egg retention and larvae development.

3.2.2 Hydrology

Under the Proposed Action, water would flow naturally through the side channels and backwater restoration projects. An increase in desirable habitat conditions suitable for the silvery minnow developmental phases would be available.

Under the No Action alternative, the side channels and backwater areas would continue to be isolated from flows in the Rio Grande and be unavailable for all silvery minnow life stages.

3.2.3 Water Resources and Water Balance

The intent of the Proposed Action is to increase habitat availability for the silvery minnow. The creation of additional surface area may increase evaporation, however we do not anticipate any significant water depletions.

Under the No Action Alternative, there would be no change to surface water and no additional habitat for the silvery minnow. Evapotranspiration losses would increase as non-native vegetation matures and reproduces throughout the Proposed Action areas.

3.2.4 Noxious Weeds

Under the Proposed Action, the removal of saltcedar, Russian olive and Siberian elm will have a positive result by allowing native vegetation to flourish and proliferate.

The No Action Alternative would result in continued growth, expansion and consumption of water by non-native vegetation in and around the project area near the Rio Grande.

3.2.5 Threatened and Endangered Species and Species of Special Status

Two threatened and endangered species: the Rio Grande silvery minnow and the flycatcher; and the Yellow Billed Cuckoo, a USFWS candidate species, historically occurred on Tribal Lands.

Rio Grande Silvery Minnow (*Hybognathus amarus*)

No long-term adverse impacts to silvery minnow or associated habitat are anticipated to occur from short-term construction of new habitat. The anticipated benefits to the silvery

minnow and its habitat resulting from habitat development far outweigh any potential negative impacts.

The No Action Alternation would result in continued poor habitat conditions in the Cochiti Reach.

Southwestern willow flycatcher (*Empidonax trailii extimus*)

Because the project site does not contain actual or potential habitat for the species, the Proposed Action and No Action Alternative would have no effect on breeding habitat and no direct effects to the species.

Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*, Cuckoo)

The relatively limited amount of potential Yellow-billed Cuckoo habitat to be removed combined with the mitigation planting ratios that will occur under the Proposed Action may result in minor positive impacts for the cuckoo.

The No Action Alternation would not alter riparian conditions or habitat utilized by this species, and no effects will occur.

3.2.6 Cultural Resources and Traditional Cultural Properties

Cultural Resources include archeological sites, sites eligible for the State Register of Cultural Properties and/or the National Register of Historic Places (NRHP), and properties of traditional religious or cultural importance (Traditional Cultural Properties [TCPs]).

No cultural resources have been identified in the Area of Impact (AOI) of the Proposed Action. In addition, no TCPs or sacred sites were identified in the AOI. The probability of the existence of any artifacts that might have once existed in the floodplain of the Rio Grande is of very low probability (J. Hanson, pers communication). This is due to the nature of the meandering of the Rio Grande and habitat modifications. Therefore, no impacts to cultural resources or TCPs are anticipated due to the Proposed Action or the No Action Alternative.

3.2.7 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in assets held in trust by the United States government for Indian tribes or for Indian individuals. Some examples of ITAs are lands, minerals, water rights, hunting and fishing rights, titles, and money. ITAs cannot be sold, leased, or alienated without the express approval of the United States government. The United States has a trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or individuals by treaties, statutes, Executive Orders, and rights further interpreted by the courts. This trust responsibility requires that all Federal

agencies take all actions reasonably necessary to protect such trust assets. The Proposed Action would be undertaken on the Santo Domingo Tribal Lands, however, the project has received the full support of the Tribe.

There are no ITAs identified that would potentially be adversely affected due to the Proposed Action or the No Action alternative.

3.2.8 Socioeconomic Considerations

Short-term positive economic impacts to the Santo Domingo community would be observed through temporary employment of sawyers and laborers while construction occurs.

The proposed project and the No Action Alternatives would have no adverse impacts to the economy of Sandoval County or the Santo Domingo Pueblo.

3.2.9 Land Use

The Proposed Action and No Action Alternatives would have no effect on current uses of water for agriculture, ranching, residential, or other activities in the area. The Proposed Action and no Action Alternatives will not affect adjacent agricultural land use and will not change current land status or uses.

3.2.10 Environmental Justice

The planning and decision-making process for actions proposed by Federal agencies involves a study of other relevant environmental statutes and regulations, including EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations," which was issued by President Clinton on February 11, 1994 (FR. 1994b). The essential purpose of EO 12898 is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

The Proposed Action would be constructed entirely on lands of the Santo Domingo Tribe, a minority population. However, there are no anticipated environmental effects that would be adverse to tribal members. The Proposed Action will provide employment opportunities to tribal members, a positive benefit to the Tribe.

The No Action Alternation would not adversely affect the use of the proposed action site and will have no bearing on the Santo Domingo community.

3.2.11 Irretrievable Commitment of Resources of the Proposed Action

The implementation of the project would result in the commitment of resources such as fossil fuels, construction materials, and labor. In addition, Federal funds will be expended for the construction of the proposed project.

3.2.12 Cumulative Impacts

The Proposed Action would have a net positive benefit to the silvery minnow in the Cochiti reach because of the enhanced habitat availability. Future restoration projects on Santo Domingo will be cumulative, increasing habitat for threatened and endangered species and overall biodiversity on Santo Domingo Tribal Lands.

Restoration efforts from neighboring tribes and pueblos would also benefit from this project because of increased habitat connectivity for the silvery minnow. Reclamation recently classified three priority sites in the Rio Grande corridor of Santo Domingo Tribal Lands in which measures will be taken to protect and restore the river's banks and levees. The anticipated methods to be used by Reclamation are expected to have no adverse impacts to any endangered or threatened species. Cumulative impacts from these projects would benefit the overall recovery efforts of the silvery minnow in the Cochiti reach by increasing the availability and connectivity of habitat in upper reaches of the Middle Rio Grande.

Chapter 4. ENVIRONMENTAL COMMITMENTS BY THE SANTO DOMINGO TRIBE

All applicable permits have been obtained prior to implementation of the project, including but not limited to:

- Section 7 of the ESA as administered by the US Fish and Wildlife Service. To protect shallow water habitat adjacent to the bank line during construction, a silt curtain will be installed. Standard best management practices will be used to prevent pollution an unnaturally high level of sediment loading in the river. To protect aquatic habitats from spills or contamination, hydraulic lines will be protected from punctures. Additionally, all fueling will take place outside the active floodplain, and all equipment will undergo cleaning and inspection prior to operation. Equipment will be parked on predetermined locations on high ground away from the project area overnight.
- Avoid impacts to birds protected by the Migratory Bird Treaty Act (16 U.S.C. 703) by scheduling construction outside of the normal bird breeding and nesting season (April 15 through August 15) for most avian species or conducting preconstruction breeding surveys and monitoring if construction were to occur during the breeding and nesting season, and consult with USFWS if affected species are observed.
- Coyote willow will be collected from Site Six, Seven and Eight and replanted adjacent to each channel (see page 5, section 2.2.2).